

CLAIMS:

1. A coating composition for use as a surface coating for polymer release films for use in at least one of high temperature and high humidity applications, which comprises a solution of at least one hydroxypropyl methylcellulose having hydroxypropyl molar substitution of from 0 to about 0.82 in combination with at least one water-borne fluorochemical additive selected from perfluoralkyl methacrylic acid copolymers.
2. A composition as claimed in Claim 1, wherein the amount of the at least one hydroxypropyl methylcellulose having hydroxypropyl molar substitution of from 0 to about 0.82 comprises from about 27% to about 50% by weight of the solids in the solution, while the amount of the fluorochemical additive comprises from about 73% to about 50% by weight of solids in the solution.
3. A composition as claimed in Claim 1, wherein the solution includes water and an organic solvent.
4. A composition as claimed in Claim 1, wherein the solution comprises alcohol and water and the amount of water in the solution may range from about 80% to about 10% by weight of total solution and the amount of organic solvent may range from about 20% to about 90% by weight.
5. A composition as claimed in Claim 1, wherein the percent by weight solids in the solution is less than about 2% by weight.
6. A process for coating the surface of a polymer film to provide a release film for use in high temperature and/or high humidity conditions, which comprises coating at least one surface of the polymer film with a solution as claimed in Claim 1 to provide a coating weight of from at least about 0.004 lb/ream to about 0.3 lb/ream per side and drying the coated film to set the coating. In another embodiment of this process, the film is coated on both sides in separate passes or in a single pass to achieve the desired coating weight.
7. A process as claimed in Claim 6, wherein the coating weight is from about 0.1 lb/ream per side to about 0.3 lb/ream per side.
8. A process as claimed in Claim 6, wherein the release polymer film is coated on at least one surface.
9. A process for curing rubber which comprises forming a sheet rubber layer in a calendar, laying layers of a release film obtained by the process of Claim 6 between layers of the sheet rubber, tightly overwrapping the stack of layers with a release film or cloth, before subjecting the stack of layers to elevated temperature in a dry or steam oven wherein the sheet rubber or sheet molding compound is cured and subsequently unwrapping the stacked, cured sheets.
10. A process for producing sheet molding composites which comprises:
 - (a) casting a layer of heat-curable thermosetting resin, in fluid form, onto a continuously advancing polymeric release film;

- (b) introducing reinforcing material onto the advancing fluid layer;
- (c) laying a polymeric film on the top surface of said reinforced fluid layer thereby forming a sandwich composite;
- (d) advancing said sandwich composite through a series of kneading and compaction rolls; and
- (e) winding the sandwiched composite into a roll for partial curing;

the improvement comprising using a release film obtained by the process of Claim 6.

11. A process for making thick molding composites, comprising

- (a) introducing reinforcing material into a heat-curable thermosetting resin, in fluid form and mixing same until the material is mixed and wetted;
- (b) casting a layer of said mixture onto a continuously advancing polymeric film;
- (c) laying a polymeric film on the top surface of said reinforcing material-resin layer to form a sandwich composite;
- (d) advancing the sandwich composite through at least one compaction roll;
- (e) cutting the continuous lengths of the sandwich composite into lengths for partial curing;

the improvement comprising using a release film obtained by the process of Claim 6.